

App. Serial No.: 10/044,398
Atty. Docket No.: 0026-011

IN THE CLAIMS

Please amend the claims as follows:

1. (currently amended) An apparatus for proportioning a chemical with a solvent, comprising:
 - a flow measurement apparatus for measuring the flow rate of the solvent;
 - a control unit for calculating the quantity of chemical to be added to the solvent based at least in part on the flow rate of the solvent; [[and]]
 - a flow control device for metering the quantity of the chemical added to the solvent; and
 - at least one outlet for dispensing a mixture of the solvent and the chemical at a variable flow rate; and
 - wherein the control unit is operative to automatically adjust the quantity of the chemical added to the solvent to compensate for changes in demand of the mixture from the at least one outlet.
2. (original) The apparatus for proportioning a chemical with a solvent of claim 1, and further including:
 - a second flow measurement apparatus for measuring the flow of the chemical.
3. (original) The apparatus of claim 1, wherein:
 - the control unit receives input from the flow measurement apparatus; and
 - the control unit controls the flow control device.
4. (previously presented) The apparatus for proportioning a chemical with a solvent of claim 1, further comprising:
 - the chemical; and wherein
 - the chemical is a cleaning substance.

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5. (previously presented) The apparatus for proportioning a chemical with a solvent of claim 1, further comprising:

the chemical; and wherein
the chemical is a soap.

6. (previously presented) The apparatus for proportioning a chemical with a solvent of claim 1, further comprising:

the solvent; and wherein
the solvent is water.

7. (original) The apparatus for proportioning a chemical with a solvent of claim 1, wherein:

the flow of the solvent varies during the operation of the apparatus.

8. (original) The apparatus for proportioning a chemical with a solvent of claim 1, wherein:

the flow rate of the solvent varies according to the quantity of a plurality of spray wands which are in operation at any given time.

9. (previously presented) The apparatus for proportioning a chemical with a solvent of claim 1, wherein:

the flow measurement apparatus is a flow sensor.

10. (original) The apparatus for proportioning a chemical with a solvent of claim 1, wherein:

the control unit is a personal computer.

11. (currently amended) The apparatus for proportioning a chemical with a solvent of claim 1, wherein:

the flow control device is a precision pump.

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12. (previously presented) The apparatus for proportioning a chemical with a solvent of claim 1, wherein:

the flow control device is a proportioning solenoid valve.

13- 21. (canceled)

22. (currently amended) An apparatus for mixing a chemical with water in a vehicle washing device, comprising:

water flow measurement means for measuring the flow of water;

calculating means for calculating a desired flow rate for the chemical; [[and]]

flow rate controlling means for controlling the flow rate for the chemical; and

outlet means for dispensing a mixture of the solvent and the chemical at a variable flow rate; and

wherein the calculating means is operative to automatically adjust the quantity of the chemical added to the water to compensate for changes in demand of the mixture from the outlet means.

23. (original) The apparatus of claim 22, and further comprising:

chemical flow measurement means for measuring the flow rate of the chemical.

24. (original) The apparatus of claim 22, wherein:

the water flow measurement means is a flow sensor.

25. (previously presented) The apparatus of claim 23, wherein:

the chemical flow measurement means is a flow sensor.

26. (previously presented) The apparatus of claim 22, wherein:

the flow rate controlling means is a proportioning solenoid valve.

27. (original) The apparatus of claim 22, wherein:

the flow rate controlling means is a variable rate pump.

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28. (original) The apparatus of claim 27, wherein:
the variable rate pump is an air driven pump.

29. (original) The apparatus of claim 22, and further including:
at least one pump for providing the water under pressure.

30. (original) The apparatus of claim 29, wherein:
the pump is an air driven pump.

31. (previously presented) The apparatus for proportioning a chemical with a solvent of
claim 1, wherein:
the control unit calculates the quantity of chemical to be added based at least in part on a
PID algorithm.

32. (canceled)

33. (currently amended) The apparatus for proportioning a chemical with a solvent of
~~claim 32~~ claim 1, wherein:
the outlet comprises at least one spray wand.

34. (previously presented) The apparatus for proportioning a chemical with a solvent of
claim 33, wherein:
the outlet comprises a plurality of spray wands.

35. (currently amended) The apparatus for proportioning a chemical with a solvent of
~~claim 32~~ claim 1, wherein:
the outlet comprises at least one wash nozzle.

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36. (previously presented) The apparatus for proportioning a chemical with a solvent of claim 35, wherein:

the outlet comprises a plurality of wash nozzles.

37. (currently amended) The apparatus for proportioning a chemical with a solvent of ~~claim 32~~ claim 1, wherein:

the outlet comprises a plurality of spray wands and a plurality of wash nozzles.

38. (currently amended) The apparatus for proportioning a chemical with a solvent of ~~claim 32~~ claim 1, further comprising:

a pump coupled to provide said solvent to said outlet under pressure; and
wherein said flow measurement apparatus is disposed between said pump and said outlet.

39. (previously presented) The apparatus of claim 22, wherein:
the calculating means includes a PID algorithm.

40. (canceled)

41. (currently amended) The apparatus of ~~Claim 40~~ Claim 22, wherein:
the outlet means comprises at least one spray wand.

42. (previously presented) The apparatus of Claim 41, wherein:
the outlet means comprises a plurality of spray wands.

43. (currently amended) The apparatus of ~~Claim 40~~ Claim 22, wherein:
the outlet means comprises at least one wash nozzle.

44. (previously presented) The apparatus of Claim 43, wherein:
the outlet means comprises a plurality of wash nozzles.

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45. (currently amended) The apparatus of ~~Claim 40~~ Claim 22, wherein:
the outlet means comprises a plurality of spray wands and a plurality of wash nozzles.

46. (currently amended) The apparatus of ~~claim 40~~ claim 22, further comprising:
a pump coupled to provide said solvent to said outlet means under pressure; and
wherein said water flow measurement means is disposed between the pump and the
outlet means.